0069726

SAF-RC-001
Industrial Hygiene Sampling
FINAL DATA

NO DISTRIBUTION REQUIRED

COMMENTS:

SDG 06I-1492-01 SAF-RC-001

Rad only X Chem only Rad & Chem

X Complete Partial

300 Area 303F Bldg

DATA CHEM LABORATORIES

Cover Page

Report Identification Number: 06I-1492-01
Subcontract Number: 0000X-BO-G0058-B-Mod#4
Name of Industrial Hygienist: Denise A. Pitts / Henry W. Ruby
Laboratory Identification Number: DCHM
SAF#: RC-001 / R303F0 J452
Payroll#: 8C292

Sample Information

Sample Date	Customer Sample Number	Laboratory Sample Number	Method	Analytical Batch Identification	Sample Matrix
29 Mar 2006	J11H57	06I12103	NMAM 7300M	G062Z00Q	MCE
29 Mar 2006	J11ML4	06I12104	NMAM 7300M	G062Z00Q	MCE
29 Mar 2006	J11ML5	06I12105	NMAM 7300M	G062Z00Q	MCE
29 Mar 2006	J11ML2	06I12106	NMAM 7300M	G062Z00Q	MCE
29 Mar 2006	J11ML3	06I12107	NMAM 7300M	G062Z00Q	MCE
29 Mar 2006	J11FJ0	06I12108	NMAM 7300M	G062Z00Q	MCE
29 Mar 2006	J11FJ1	06I12109	NMAM 7300M	G062Z00Q	MCE

I certify that this electronic image and all hardcopies produced from this image accurately represent the data and are in compliance with the contract specific requirements, both technically and for completeness, other than the conditions detailed above or in the sample data package narrative. Release, by submission through email, the data contained in this electronic image and the computer-readable EDD (as applicable), has been authorized by the laboratory Manager or the Manager's designee.

Name: Joanna C. Sanchez
Title: Chemist
Date: April 04, 2006

meets our volumes
from project
JK
4/4/06

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Case Narrative Page

Report Identification Number:	06I-1492-01
Subcontract Number:	0000X-BO-G0058-B-Mod#4
Name of Industrial Hygienist:	Denise A. Pitts / Henry W. Ruby
Laboratory Identification Number:	DCHM
SAF#:	RC-001 / R303F0 J452
Payroll#:	8C292

General Set Information: There are 7 samples in set 06I-1492-01 which were analyzed for beryllium, lead and cadmium on MCE filter. No problems were encountered with the receipt of these samples and no contact with the CTR was required.

Method Summary: Samples were transferred to 50 ml centrifuge tubes and digested in the presence of 10 mL of 1:1 (v/v) nitric acid. Samples were digested in a hot block set at 110°C for 40 minutes. Samples were then diluted to a 25 mL volume with ASTM Type II Water. Samples were shaken and delivered for ICP analysis.

Sample Preparation: All samples were prepared in accordance with DCL SOP "IH-AN-021" and NIOSH method NMAM 7300 modified for hot block digestion.

Holding Times: The holding times were met for both sample preparation and analysis.

Instrument Calibration: Instrument calibration was performed in accordance with NIOSH method NMAM 7300.

Initial and Continuing Calibration Verification Analysis: Beryllium, cadmium and lead recoveries in all Initial Calibration Verification (ICV) and Continuing Calibration Verification (CCV) samples are within the quality control limits of +/- 10%.

Initial and Continuing Calibration Blank Analysis: No beryllium results were found in the Initial Calibration Blank (ICB) or Continuing Calibration Blanks (CCB) at levels above the Limit of Quantitation (LOQ) of 0.01 ug/sample. No cadmium results were found in the Initial Calibration Blank (ICB) or Continuing Calibration Blanks (CCB) at levels above the Limit of Quantitation (LOQ) of 0.04 ug/sample. No lead results were found in the Initial Calibration Blank (ICB) or Continuing Calibration Blanks (CCB) at levels above the Limit of Quantitation (LOQ) of 0.4 ug/sample.

Method Blank Analysis: No beryllium, cadmium or lead was found in the media blank sample above the Contract Required Detection Limit (CRDL).

Dilution(s): NA.

Case Narrative Page

Laboratory Control Sample and Duplicate Analysis: One Laboratory Control Sample (LCS) and one Laboratory Control Sample Duplicate (LCSD) were prepared and analyzed with the sample batch. The LCS results were within the control limit of +/- 20%. The Relative Percent Differences (RPD) between the LCS and the LCSD were within the control limit of 20%.

Replicate Analysis: One sample was replicated with this analysis run. The RPD between the sample and the replicate was within the control limit of 20%. If the result of the sample or replicate is below the CRDL, replicate analysis is negligible.

Flagging Codes: None

Nonconformance/Corrective Action Report (NC/CAR): N/A

Sample Calculation: The final results are calculated by the following equation:

Final result for aqueous samples (µg/sample) = (A) x (B) x (C)

Where:

A = Analyte concentration from instrument determination (µg/L)

B = Concentration factor from sample preparation

$$= \frac{\text{Final Volume of Digestate (L)}}{\text{Sample}}$$

C = Dilution performed at time of analysis

Example Calculation: (1 µg/L) x (0.025 L/sample) x (1) = 0.025 µg/sample

Miscellaneous Comments: None.

Report Page

Report Identification Number: 06I-1492-01
Subcontract Number: 0000X-BO-G0058-B-Mod#4
Name of Industrial Hygienist: Denise A. Pitts / Henry W. Ruby
Laboratory Identification Number: DCHM
SAF#: RC-001 / R303F0 J452
Payroll#: 8C292

Customer Sample Number	Laboratory Sample Number	Date Analyzed	Beryllium µg/sample		Lead µg/sample		Cadmium µg/sample	
J11H57	06I12103	03 Apr 2006	<0.01	U	<0.4	U	<0.04	U
J11ML4	06I12104	03 Apr 2006	<0.01	U	<0.4	U	<0.04	U
J11ML5	06I12105	03 Apr 2006	<0.01	U	<0.4	U	<0.04	U
J11ML2	06I12106	03 Apr 2006	<0.01	U	<0.4	U	<0.04	U
J11ML3	06I12107	03 Apr 2006	<0.01	U	<0.4	U	<0.04	U
J11FJ0	06I12108	03 Apr 2006	<0.01	U	<0.4	U	<0.04	U
J11FJ1	06I12109	03 Apr 2006	<0.01	U	<0.4	U	<0.04	U
Limit of Detection (LOD)			0.01		0.4		0.04	
Required Detection Limit (RDL)								

U - Parameter not detected above LOD.
J - Parameter between LOD and RDL.

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QC Summary Page

Report Identification Number: 06I-1492-01
Subcontract Number: 0000X-BO-G0058-B-Mod#4
Name of Industrial Hygienist: Denise A. Pitts / Henry W. Ruby
Laboratory Identification Number: DCHM
SAF: RC-001 / R303F0 J452
Payroll#: 8C292

Batch ID: G062Z00Q

QC Sample ID	QC Type	Analyte	Units	Result	Parent Result	Target	Percent Rec.	Relative Percent Diff.
BL-243471-1	MB	Beryllium	µg/sample	ND	NA	NA	NA	NA
BL-243471-1	MB	Lead	µg/sample	ND	NA	NA	NA	NA
BL-243471-1	MB	Cadmium	µg/sample	ND	NA	NA	NA	NA
QC-243471-1	LCS	Beryllium	µg/sample	10.5	NA	10.0	105.	NA
QC-243471-1	LCS	Lead	µg/sample	103.	NA	100.	103.	NA
QC-243471-1	LCS	Cadmium	µg/sample	30.0	NA	30.0	99.9	NA
QD-243471-1	LCSD	Beryllium	µg/sample	10.6	10.5	10.0	106.	0.221
QD-243471-1	LCSD	Lead	µg/sample	102.	103.	100.	102.	0.724
QD-243471-1	LCSD	Cadmium	µg/sample	30.1	30.0	30.0	100.	0.402

MB - Method Blank
LCS - Laboratory Control Sample
LCSD - Laboratory Control Sample Duplicate
MS - Matrix Spike
MSD - Matrix Spike Duplicate
LD - Laboratory Duplicate

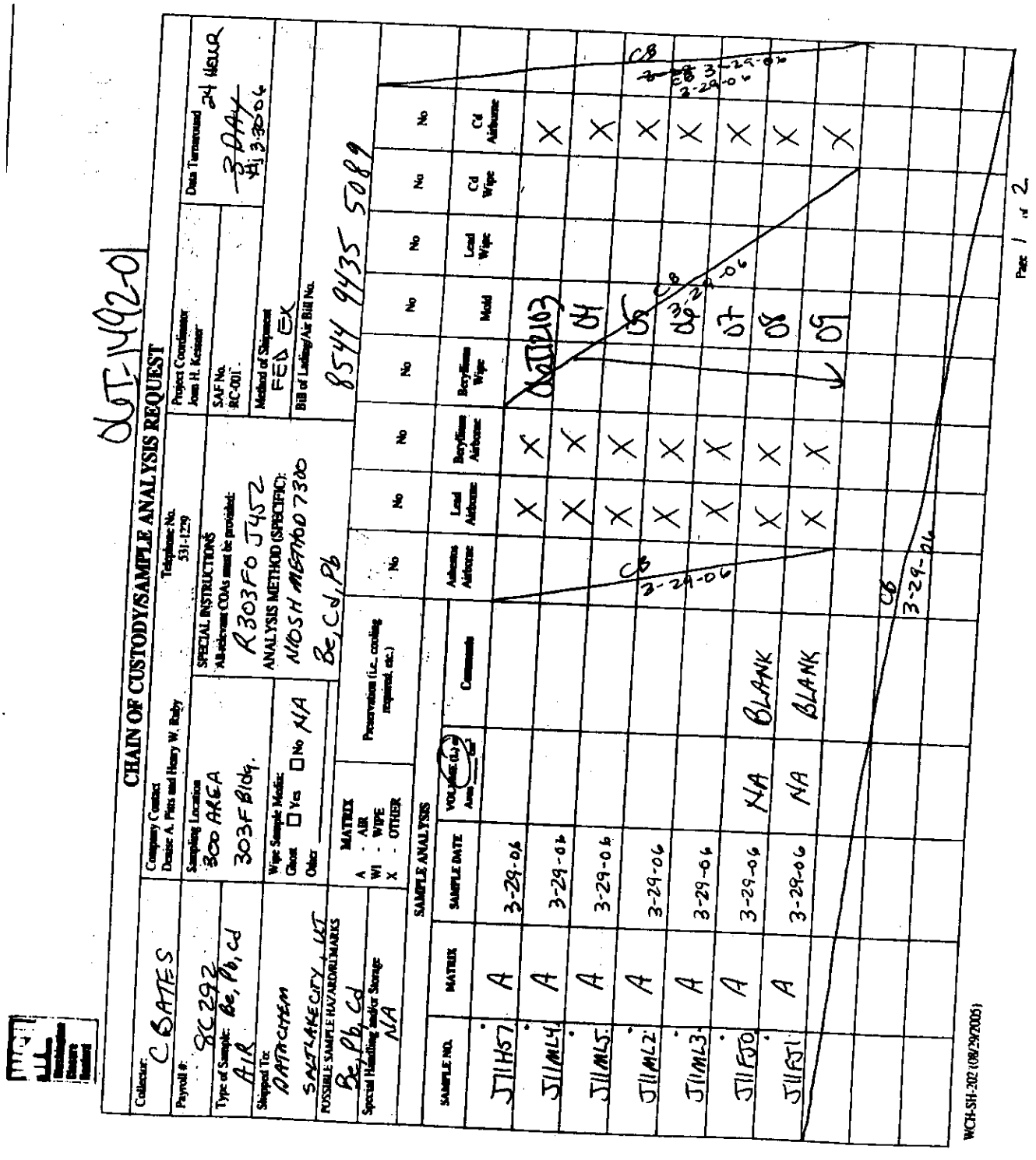
NA - Not Applicable
ND - Parameter not detected above LOD

LCS, LCSD Percent Rec. = (Result / Target) * 100.0
MS, MSD Percent Rec. = ((Result – Parent) / Target) * 100.0

LCS, LCSD Relative Percent Diff. = ((|LCS – LCSD|) / ((LCS + LCSD)/2.0)) * 100.
MS, MSD Relative Percent Diff. = ((|MS – MSD|) / ((MS+ MSD)/2.0)) * 100.
LD Relative Percent Diff. = ((|Parent – LD|) / ((Parent + LD)/2.0)) * 100

DATA CHEM LABORATORIES

COC Page



CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

OUT-1492-01

Collector: C BATES
Company Contact: Denise A. Pitts and Harry W. Roby
Telephone No.: 531-1229
Project Coordinator: Jean H. Kessler
Data Turnaround: 24 HOUR 3 DAY 4/13/2006
Payroll #: RC292
Sampling Location: 300 AREA 303F Bldg.
SPECIAL INSTRUCTIONS: All relevant COAs must be provided: R303F0 J452
SAF No.: RC-001
Method of Shipment: FED EX
Type of Sample: AIR
ANALYSIS METHOD (SPECIFIC): NIOSH M6010 7300 Be, Cd, Pb
Bill of Lading/Air Bill No.: 8544 9435 5089
Shipped To: DATACHEM SALT LAKE CITY, UT
Wipe Sample Media: Ghost ☐ Yes ☐ No NA Other
POSSIBLE SAMPLE HAZARDS/REMARKS: Be, Pb, Cd
Special Handling and/or Storage: NA
MATRIX: A - AIR, WI - WIPE, X - OTHER
Preservation (i.e., cooling required, etc.)

SAMPLE NO.	MATRIX	SAMPLE DATE	VOLUME (L) or Area (cm²)	Comments	Asbestos Airborne	Lead Airborne	Beryllium Airborne	Beryllium Wipe	Mold	Lead Wipe	Cd Wipe	Cd Airborne
J11H57	A	3-29-06				X	X	X				X
J11ML4	A	3-29-06				X	X		04			X
J11ML5	A	3-29-06				X	X		05			X
J11ML2	A	3-29-06				X	X		06			X
J11ML3	A	3-29-06				X	X		07			X
J11F50	A	3-29-06	NA	BLANK		X	X		08			X
J11F51	A	3-29-06	NA	BLANK		X	X		09			X

CB 3-29-06

WCH-SH-202 (08/29/2005)

Page 1 of 2

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DATA CHEM LABORATORIES

COC Page

Enter on line below the first Sample Number from Page One:

J11H57

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

SIGN / PRINT NAMES / USE MILITARY TIME

Relinquished By/Seal	DATE / TIME	Received By/Seal	DATE / TIME
CLIFFORD BATES / Clifford L Bates	3-29-06 1630	Rm 16 LOCKED DRAWER 3746 Bldg	3-29-06 1630
Y. Jones	3-30-06 1445	RZ Steffler R.J. Steffler	3-30-06 1445
RZ Steffler R.J. Steffler	wcH 3-30-06 1600	Fed Ex	
Fed Ex		Julie Warrams	3/31/06 0830
Metals 3 W			

LABORATORY SECTION	Received By	Title	DATE / TIME
	Julie Warrams		3/31/06 0830

REVIEWED BY: ______________________ DATE: ______________

PRINT/SIGN NAME

Page 2 of 2

WCH-SH-202 (08/29/2005)

Washington Closure Hanford

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

Collector: C BATES	Company Contact: Denise A. Pitts and Henry W. Ruby	Telephone No.: 531-1229	Project Coordinator: Joan H. Kessner	Data Turnaround: 24 HOUR ~~3 DAY~~ Hj 3-30-06
Payroll #: 8C292	Sampling Location: 300 AREA 303F Bldg.	SPECIAL INSTRUCTIONS All relevant COAs must be provided: R303F0 J452	SAF No.: RC-001	
Type of Sample: Be, Pb, cd AIR	Wipe Sample Media: Ghost ☐ Yes ☐ No NA Other ____	ANALYSIS METHOD (SPECIFIC): NIOSH METHOD 7300 Be, Cd, Pb	Method of Shipment: FED EX	
Shipped To: DATACHEM SALT LAKE CITY, UT			Bill of Lading/Air Bill No.: 8544 9435 5089	
POSSIBLE SAMPLE HAZARD/REMARKS: Be, Pb, Cd	MATRIX: A - AIR; WI - WIPE; X - OTHER	Preservation (i.e., cooling required, etc.)		
Special Handling and/or Storage: NA				

SAMPLE ANALYSIS

SAMPLE NO.	MATRIX	SAMPLE DATE	VOLUME (L) or Area ____ cm²	Comments	Asbestos Airborne	Lead Airborne	Beryllium Airborne	Beryllium Wipe	Mold	Lead Wipe	Cd Wipe	Cd Airborne
					No	No	No	No	No	No	No	No
J11H57	A	3-29-06				X	X					X
J11ML4	A	3-29-06				X	X					X
J11ML5	A	3-29-06				X	X					X
J11ML2	A	3-29-06				X	X					X
J11ML3	A	3-29-06				X	X					X
J11FJ0	A	3-29-06	NA	BLANK		X	X					X
J11FJ1	A	3-29-06	NA	BLANK		X	X					X

CB 3-29-06

CB 3-29-06

CB 3-29-06

COPY

FIELD SAMPLE COPY

Enter on line below the first Sample Number from Page One:

J11H57

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

SIGN / PRINT NAMES / USE MILITARY TIME

Relinquished By/Stored	DATE / TIME	Received By/Stored	DATE / TIME
CLIFFORD BATES Clifford L Bates	3-29-06 1630	Rm 16 LOCKER DRAWER 3746 Bldg.	3-29-06 1630
Y. Jones	3-30-06 1445	RZ Steffler R.J. Steffler	3-30-06 1445
RZ Steffler R.J. Steffler	WCH 3-30-06 1600	Fed Ex	

LABORATORY SECTION	Received By	Title	DATE / TIME

REVIEWED BY: _____ DATE: _____

PRINT/SIGN NAME

Kessner, Joan H

From: Whatley, Zona G (Gwen)
Sent: Wednesday, April 05, 2006 12:21 PM
To: Kessner, Joan H; 'griffiths@datachem.com'
Subject: RE: MCE data

For 06I-1492-01, the volumes are.....
J11H57 has a volume of 1008 liters
J11ML4 has a volume of 1623 liters
J11ML5 has a volume of 5580 liters
J11ML2 has a volume of 6177 liters
J11ML3 has a volume of 7172 liters

Sorry about the inconvenience.
Gwen

From: Kessner, Joan H
Sent: Tuesday, April 04, 2006 8:32 AM
To: Diedtrich, David J; Whatley, Zona G (Gwen)
Cc: Pitts, Denise A
Subject: RE: MCE data

Will do.
Thanks.

From: Diedtrich, David J
Sent: Tuesday, April 04, 2006 8:04 AM
To: Kessner, Joan H; Whatley, Zona G (Gwen)
Cc: Pitts, Denise A
Subject: FW: MCE data

Gwen, We need to provide Joan with air volumes. Joan, when you get the volumes from Gwen, would you please forward to the lab and have them correct report. Sorry.

From: Griffiths, Kevin W. [mailto:griffiths@datachem.com]
Sent: Tuesday, April 04, 2006 7:27 AM
To: Kessner, Joan H
Cc: Pitts, Denise A; henry.ruby@wch-rcc.com; Diedtrich, David J
Subject: MCE data

Note that air volumes were not provided

Kevin Griffiths
Project Manager
(801) 904-4302
Cell (801) 835-9597
griffiths@datachem.com

Kessner, Joan H

From: Griffiths, Kevin W. [griffiths@datachem.com]
Sent: Tuesday, April 04, 2006 7:27 AM
To: Kessner, Joan H
Cc: Pitts, Denise A; henry.ruby@wch-rcc.com; Diedtrich, David J
Subject: MCE data
Attachments: 06I-1492-01.TXT; 06I-1492-01.pdf

Note that air volumes were not provided

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